## What is claimed is:

- 1. A ceramic material, which has a dielectric constant of about 20,000 to about 55,000, a dielectric loss tangent (tan δ) of about 0.05 to about 0.25, a low capacitance change with temperature (TCC) of about -15% to about 10% at a temperature of -55°C to 150°C, a resistivity of about 10<sup>6</sup> Ω·cm to about 10<sup>9</sup> Ω·cm, and a grain size of about 0.5 to about 3.5 μ m.
- 2. The ceramic material of Claim 1, which has a grain size of about 0.8 to about 2.0 μm and a low capacitance change with temperature (TCC) of about -10% to about 0% at a temperature of -55°C to 150°C.
- 3. The ceramic material of Claim 1, wherein its composition has the following general formula (I):

$$(1-w) [(Ba_aSr_bPb_m)La_x] (Ti_vMg_z)O_3 + w Nb_2O_5$$
 (I)

15

20

10

5

wherein a is 0.5 to 0.98, b is 0 to 0.3, m is more than 0 to 0.3, x is 0 to 0.05, y is 0.90 to 0.995, z is 0.005 to 0.1, and w is 0 to 0.05 in weight ratio.

- 4. The ceramic material of Claim 3, wherein m is 0.05 to 0.2.
- 5. The ceramic material of Claim 1 for use in the production of capacitors and modulus.
- 6. A ceramic powder, which has its composition with the following general formula (I):

$$(1-w) [(Ba_aSr_bPb_m)La_x] (Ti_vMg_z)O_3 + w Nb_2O_5$$
 (I)

25

wherein a is 0.5 to 0.98, b is 0 to 0.3, m is more than 0 to 0.3, a+b+m=1.0, x is 0 to 0.05, y is 0.90 to 0.995, z is 0.005 to 0.1, and w is 0 to 0.05 in weight ratio.

- 7. The ceramic powder of Claim 6, wherein m is 0.05 to 0.2.
- 30 8. The ceramic powder of Claim 6 for use in the production of capacitors and modules.

5

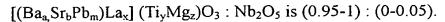
10

20

30

- 9. The ceramic powder of Claim 6 for use in the production of a capacitor having a dielectric constant of about 20,000 to about 55,000, a dielectric loss tangent (tan δ) of about 0.05 to about 0.25, a low TCC of about -15% to about 10% at a temperature of -55°C to 150°C, a resistivity of about 10<sup>6</sup> Ω·cm to about 10<sup>9</sup> Ω·cm, and a grain size of about 0.5 to about 3.5 μ m.
- 10. The ceramic powder of Claim 9, wherein the capacitor has a grain size of about 0.8 to about 2.0 μm and a low capacitance change with temperature (TCC) of about -10% to about 0% at a temperature of -55°C to 150°C.
- 11. The ceramic powder of Claim 6, which further comprises a glass component selected from the group consisting of a low-firing-temperature glass, lead glass or a combination thereof.
  - 12. The ceramic powder of Claim 11, wherein the glass component is present from 10% to 35% by weight, based on the total amount of the ceramic powder and the glass component.
- 13. The ceramic powder of Claim 11 for use in the production of low temperature co-fired capacitors.
  - 14. The ceramic powder of Claim 13, wherein the low temperature co-fired capacitors have dielectric constants of about 360 to about 2,500.
  - 15. The ceramic powder of Claim 14, wherein the low temperature co-fired capacitors have a dielectric loss tangent (tan  $\delta$ ) of about 0.065 to about 0.27.
  - 16. A ceramic composition of claims 3 and 6, which is prepared from raw materials of carbonates, oxides and/or hydroxides of barium (Ba), titanium (Ti), magnesium (Mg) and optionally strontium (Sr), lanthanum (La) and niobium (Nb), and lead titanate (PbTiO<sub>3</sub>) and/or lead oxide (PbO), wherein the atomic percentage of lead, based on the total amount of Ba, Ti, Mg, Pb, and optionally Sr, La and Nb, is more than 0 to 0.158.
  - 17. The ceramic composition of Claim 16, wherein the atomic ratio of Ba: Sr: Pb: La: Ti: Mg is (0.475-0.98): (0-0.03): (more than 0 to 0.3): (0-0.05): (0.90-0.995): (0.005-0.1).
  - 18. The ceramic composition of Claim 16, wherein the weight ratio of

5 A 1 25 5



- 19. The ceramic composition of Claim 16 for use in the production of capacitors and modulus.
- 20. The ceramic composition of Claim 16 for use in the production of a capacitor having a dielectric constant of about 20,000 to about 55,000, a low dielectric loss tangent (tan δ) of about 0.05 to about 0.25, a low TCC of about -15% to about 10% at a temperature range of -55°C to 150°C, a resistivity of about 10<sup>6</sup> Ω·cm to about 10<sup>9</sup> Ω·cm, and a fine grain size of about 0.5 to about 3.5 μ m.
- 10 21. The ceramic composition of Claim 20, wherein the capacitors have a grain size of about 0.8 to about 2.0  $\mu$  m and a TCC value of about -10% to about 0%.